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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/565,798	01/25/2006	Buddie Gordon Miller	052895	9646

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EXAMINER

VENNE, DANIEL V

ART UNIT	PAPER NUMBER
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3617

NOTIFICATION DATE	DELIVERY MODE
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08/18/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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patentmail@whda.com

Office Action Summary	Application No. 10/565,798	Applicant(s) MILLER, BUDDIE GORDON	
	Examiner DANIEL V. VENNE	Art Unit 3617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 7/2/2009, 7/13/2009 and 8/3/2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2,3,5-23,25 and 26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2,3,5,6,8,9,11-16,19-22,25 and 26 is/are rejected.
- 7) ☒ Claim(s) 7,10,17,18 and 23 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. An amendment was received from applicant on 7/2/2009, along with subsequent amendments received on 7/13/2009 and 8/3/2009.
2. Claims 2, 3, 5, 6, 7, 10, 13, 15, 16, and 26 are amended with amendment received on 7/2/2009; claim 25 is amended with amendment received on 7/13/2009.
3. Claims 1, 4 and 24 are canceled.
4. Claims 2, 3, 5-23, 25 and 26 are remaining in the application.
5. The amendments to the specification of 7/2/2009 and 8/3/2009 are accepted.

Claim Objections

6. Claim 15 is objected to because of the following informalities:

Claim 15 recites "at bottom" on line 11, which should be -- a bottom --.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
8. Claims 2, 3, 5, 6, 9, 11-16, 22 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fletcher (US 3929644). Fletcher discloses a boat [10] comprising a hull [11] with two hull portions (or sections) [12a, 12b] connected together considered a single hull unit (hull) [11] (as so broadly claimed since applicant has not defined the term "single hull unit" or "hull unit" in either the claims or in the specification

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other than to indicate that the term means the same as a single unit-body hull), and having at least one elongated, substantially vertical slot (flow passage) [19] extending substantially therethrough such that the slot divides the single hull unit into at least two substantially separate buoyant compartments (see Fig. 2), such that water, on which the boat is floating, freely communicates with the slot [19]; the slot is open at a bow and a stern and is closed at its top. Fletcher does not explicitly disclose that water, on which the boat is floating, also freely communicates with air within and surrounding the slot [19]. When scavenging oil or other floating debris from the surface of a body of water, the deck [20] is located with reference to the draft of the craft [10] so that it lies generally along the surface layer of a body of water in which the craft is located so that the upper surface of the deck is washed with such upper layer such that the surface layer of the body of water can flow over the deck [20] of the craft [10]; therefore, the waterline during oil scavenging operations is generally at the deck level (see col. 2, lines 59-66). The waterline of any marine vessel is a function of loading, buoyancy, speed and water surface conditions. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains to adjust loading, buoyancy and speed such that the waterline of the craft is just below the deck [20] or that an irregular water surface would also freely communicate with air within and surrounding the slot [19]; adjusting the waterline such that the water surface would be just below the deck of the craft would allow the craft to move more freely with less drag and water plane area (horizontal water surface area intersected by the hull of the boat) for maneuvering and transit when not engaged in oil scavenging operations. Such a

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waterline adjustment would save time and be more energy efficient (in fuel savings) when transiting to and from a work site and not accumulating oil and other debris. With such a waterline adjustment, with respect to claim 11, the slot [19] extends upwardly to a location above the waterline of the boat, such that the slot [19] is simultaneously above and below the waterline. The single hull unit has a single bow portion which can be considered the forward section of the bow (ramp or gate) [24] between the two downwardly projecting hull portions [12a, 12b], and which is substantially at a centerline of the single hull unit (see Fig. 2). The slot [19] has a cross sectional area such that a vertical dimension of the cross sectional area of the slot is substantially greater than a horizontal dimension of the cross sectional area of the slot (see Fig. 2). With respect to claim 3, the slot [19] extends longitudinally through the single hull unit (between hull portions as shown in Fig. 2). With respect to claim 5, the slot [19] is more open at the bow than at the stern (see Fig. 2); hence, the slot is open at the bow and partly closed at the stern. With respect to claim 6, the slot is open on a bottom of the single hull unit (between hull portions as shown in Fig. 2). With respect to claim 9, either of the openings at the bow or the stern can be considered an air vent which communicates with the slot [19], since an air vent (as recited) can be considered any opening for which air can communicate with the slot [19]; additionally, openings [57] can be considered air vents when the tanks [17a, 17b] are empty of liquid. With respect to claims 15 and 16, the slot [19] extends at least partially in a transverse direction through the single hull unit (hull) [11] and is partly angled (applicant has not recited inclined and any angle including 0 degrees and 90 degrees is an angle) on each vertical side. Regarding claim

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17, the two hull sections [12a, 12b] can be considered hull units and the hull can be considered a catamaran (see abstract and col. 5, line 10). Regarding claim 22; in as much as the center buoyancy is the centroid of the underwater portion of a vessel or center of the underwater volume (Principles of Naval Architecture, Vol. I Stability and Strength, pp. 16-17, (c) 1988 SNAME), only one center of buoyancy is provided for any single immersed object; unless a slot completely separates a submerged object into more than one separate objects, only one center of buoyancy can exist for the object when submerged. However, if one considers that the center of buoyancy is the sum of all centers of buoyancy for each portion of a submerged hull, then it can be considered that Fletcher would inherently have a center of buoyancy for each symmetric port and starboard half of the hull on each side of the slot with a net center of buoyancy (or net centroid of underwater volume) being between the individual fractional centers of buoyancy for the two symmetric port and starboard halves. The recitation in the preamble of the independent claims for the boat "having enhanced stability, safety and comfort" can be considered to be present in Fletcher, since the Fletcher hull design can be considered to have enhanced stability, safety and comfort in as much as these are not structural limitations and the hull design of Fletcher is improved for enhanced in stability, safety and comfort over at least a canoe or other lesser type of vessel.

9. Claims 8, 15, 16, 22, 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klose (US 3291088). Klose discloses a boat with a single hull unit (hull) [50] having at least one elongated vertical slot (daggerboard trunk) [64] along the boat centerline and extending through the hull, and at least partially in a transverse

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direction by virtue of the width of the slot; the slot is open at the bottom with the daggerboard [76] not in place, and only open at the top with the daggerboard [76] and plug not put in place. The slot is angled in as much as any angle including 0 degrees or 90 degrees is an angle and applicant has not recited that the slot is inclined. Water can freely communicate with the slot when the removable daggerboard [76] is not fitted in place within the slot. The slot extends longitudinally through the boat hull, although not through the entire hull length. Klose does not disclose that the slot divides the boat hull into at least two substantially buoyant compartments or extends substantially therethrough the single hull unit such that the slot divides the single hull unit into at least two substantially separate buoyant compartments; however, it would have been obvious to one of ordinary skill in the art to adjust the length of the slot as a matter of design choice depending on the length of daggerboard desired for the boat; a sufficiently long slot for such a daggerboard would be considered to divide the boat into two substantially buoyant compartments or extend approximately the length of the boat hull and would also be closed at the bow and at the stern. The rationale would have been to adjust the length of the slot depending on the length of the daggerboard desired for achieving the specific stability and performance characteristics desired for the boat hull. With the daggerboard removed, and a plug not in place, the slot would be open at a top and bottom and the opening at the top of the slot can be considered an air vent. In as much as the center buoyancy is the centroid of the underwater portion of a vessel or center of the underwater volume (Principles of Naval Architecture, Vol. I Stability and Strength, pp. 16-17, (c) 1988 SNAME), only one center of buoyancy is provided for any

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single immersed object; unless a slot completely separates a submerged object into more than one separate objects, only one center of buoyancy can exist for the object. However, if one considers that the center of buoyancy is the sum of all centers of buoyancy for each portion of a submerged hull, then it can be considered that Klose would inherently have a center of buoyancy for each symmetric port and starboard half of the hull on each side of the slot with a net center of buoyancy (or net centroid of underwater volume) being between the individual fractional centers of buoyancy for the two symmetric port and starboard halves. The recitation in the preamble of the independent claims for the boat "having enhanced stability, safety and comfort" can be considered to be present in Klose, since the Fletcher hull design can be considered to have enhanced stability, safety and comfort in as much as these are not structural limitations and the hull design of Klose is improved for enhanced in stability, safety and comfort over at least a canoe or other lesser type of vessel.

10. Claims 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fletcher (US 3929644), in view of Thiger et al. (US 6250240 B1). Fletcher discloses all claimed features as indicated above with the exception of the boat comprising a second slot, wherein the second slot extends longitudinally through the single hull unit or includes a plurality of elongated slots or 3 elongated slots, as recited. Thiger et al. in Fig. 8 shows a trimaran hull with three downwardly extending hull portions and two channels or slots, one between each hull portion. Thiger et al. in Fig. 7 shows four downwardly extending hull portions with three channels or slots, one between each hull portion. Therefore, it would have been obvious at the time the invention was made to

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one of ordinary skill in the art to which the subject matter pertains to provide a hull configuration as disclosed by Thiger et al. with Fletcher that would provide the recited second slot, plurality of slots or 3 slots as recited to create the invention as claimed by applicant. A trimaran-type hull (3 hull sections) or quadramaran-type (four hull sections) configuration instead of a catamaran-type (two hull sections) hull would provide Fletcher additional venturi slots [19] that would assist in release of fluid from the tanks, as well as provide additional hull portions for increased waterplane area and lateral stability, and additional tanks in each hull portion for fluid storage. Such a hull design would provide the expected results of increased capacity and capability for oil scavenging by adding additional slots for increased the venturi flow capability for releasing fluids from tanks, provide for additional storage capacity for waste liquids with the additional tanks, as well as provide for enhanced lateral stability for the boat.

Allowable Subject Matter

11. Claims 7, 10, 17, 18 and 23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

12. Applicant's arguments filed on 7/2/2009 have been fully considered but they are not persuasive. Regarding applicant's arguments pertaining to the Fletcher reference, Fletcher is considered a single hull unit made up of two hull sections no matter that the vessel is a catamaran-type hull, as explained in the rejection above. The slot [19] of Fletcher is considered to extend through the single hull unit such that the slot divides

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the single hull unit into two substantially separate buoyant compartments, as further explained in the rejection above. Regarding applicant's arguments pertaining to the Klose reference, the slot of Klose extends at least partially through the single hull unit in as much as the slot has a width. Applicant further argues that if the daggerboard [76] was removed and a plug was not in place, the Klose vessel could potentially sink; this is not convincing and the applicant is speculating that the vessel may not have sufficient seaworthiness with the daggerboard and plug removed. Applicant further argues that the Klose plug is used whenever the daggerboard is not in place; with the daggerboard removed and the plug in place, the slot is open at the bottom meeting claim 15. In view of above, the rejections presented above are considered valid and are not withdrawn.

Conclusion

13. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel V. Venne whose telephone number is (571) 272-7947. The examiner can normally be reached between 7:30AM - 4:00PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Samuel J. Morano can be reached on (571) 272-6684. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (In USA or CANADA) or 571-272-1000.

DVV

/Lars A. Olson/

Primary Examiner, Art Unit 3617